

A New Goby from Singapore Island.

By A. W. C. T. HERRE

*Gobius* *hirttwistlei* new species.

Dorsal V—I—8 or 9; anal 1—10—11 or 12; there are apparently 28 or 30 scales in a longitudinal series.

The upper part of the anterior half of the body is slightly compressed, with protuberant abdomen, the posterior portion of the trunk strongly compressed; the depth is 4.3 to 3.8 times, the head 3.6 to 4 times, the caudal 4 to 5.1 times in the length; the eye equals the interorbital, 4 to 4.33 times in the head; the snout is much shorter than the eye, 4 to 6 times in the head; the pectoral equals the caudal; the ventrals are 1.6 times in the head; the least depth of the caudal peduncle is 2.2 to 2.6 times in its length; the second spine of the first dorsal is longest, 2.6 to 3 times in the head; the second and third spines of the second dorsal and anal are longest, 1.85 to 2 times in the head.

The mouth is strongly oblique, the maxillary extending beneath the front part of the eye or the anterior margin of the pupil; the backward curved teeth are in a single closely set row; the tongue is deeply emarginate, almost lunate; the scales are invisible in life and are only made out with difficulty in preserved specimens, those on the abdomen and at the second dorsal and anal bases most evident; the ventrals are beneath or behind the pectoral base; the second dorsal and anal are opposite each other; the caudal is truncate.

This little goby is transparent to translucent in life, the eggs of gravid females plainly visible through the abdominal wall. Living specimens are usually visible only when they move.

In alcohol or formalin specimens turn white and opaque at once and the fins become visible. Black specks form a more or less evident band near the base of the second dorsal and of the anal, continuing as a stripe or row to the caudal base; often there is a band of black dots from below the pectoral base along the abdomen to the anal; there are a few black specks on the nape and often the under side of the head is dotted, with a black median line on the anterior part of the abdomen.

This tiny goby is abundant in brackish water tidal creeks on the island of Singapore. Mature specimens are from 15.5 to 25 mm. in length, with no appreciable difference in the length of the sexes. Females seem to be more numerous than males. 140 specimens collected March 13th to 18th 1934, are from 14 to 25 mm. in length. The types are in the Zoological Museum of Leland Stanford Junior University, California, and co-types are in the Raffles Museum at Singapore.

F. N. CHASEN

This tiny goby is near *Gobiella pellucida* Smith, from Bangkok, Siam, but differs in the second dorsal and anal fins, in sculation, teeth, and other details. Apparently the Siam fish is found in fresh water only, the Singapore species in brackish water, but this may be merely because we know so little about these fishes.

The Singapore species has undoubtedly been overlooked in the past because of its invisibility in the water and its small size, even though it is abundant where it occurs. Specimens captured have either not been picked up or else have been discarded as very young fry of larger fish.

I take pleasure in naming this species after Mr. W. Birtwistle, Officer-in-charge, Fisheries Department, S. S. & F. M. S.